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16	IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF CALIFORNIA		
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18	FRESNO DIVISION		
19	FRIENDS OF YOSEMITE VALLEY, et al.,) Case No. CV-F-00-6191 AWI DLB	
20		DECLARATION OF PATRICK	
21	Plaintiffs,)	D. FLYNN IN SUPPORT OF DEFENDANTS' MOTION FOR STAY PENDING APPEAL	
22	DIRK KEMPTHORNE, in his	DK KEMPTHOPNE in his	
23	official capacity as Secretary of the Interior, et al.,	DATE: February 26, 2007	
24	Defendants.) TIME: 1:30 p.m.) PLACE: Courtroom 2) JUDGE: Hon. Anthony W. Ishii	
26	I, Patrick D. Flynn, declare as follow	<u>,</u>	
27	1. I received a Bachelor of Science degree in Civil Engineering from the University of		
28	Kansas in May, 1980. I have been employed by the Federal Highway Administration since June, Declaration of Patrick D. Flynn in Support		

1980, and have been a licensed professional engineer since February, 1987. Since December, 2001, I have been working as a Project Manager for the Federal Highway's Central Federal Lands Highway Division in Lakewood, Colorado. During the past five years, I have been responsible for managing roadway design and construction projects in Yosemite National Park, Sequoia and Kings Canyon National Park, Death Valley National Park, Joshua Tree National Park, Lava Beds National Monument, and also several Forest Highway projects in northern California.

- 2. The purpose of this declaration is to discuss the existing deficiencies of the Yosemite Valley Loop Road, and the negative impacts associated with delaying the completion of this roadway rehabilitation project. To illustrate the distress of the existing road conditions, I will focus on two sources of documentation; (1) National Park Service/Federal Highway Administration's Road Inventory Program and (2) the *Rehabilitation of the Yosemite Valley Loop Road Environmental Assessment*.
- 3. Road Inventory Program. The Road Inventory Program (RIP) was jointly established by the National Park Service and the Federal Highway Administration to develop long and short-range costs and programs in response to rapidly deteriorating National Park Service roads. The RIP identifies specific deficiencies for individual road segments and provides recommendations for actions needed to bring a particular roadway up to (or maintain) its designated standards based upon topography and traffic volumes, as well as establish a maintenance management program. Exhibit 1 provides RIP pavement data for the Yosemite Valley Loop Road from two different surveys; December 1999 and August 2003. RIP data shows a "snap-shot in time" of roadway conditions as they exist at the time the data was acquired. Here, the 2003 data illustrates how rapidly the condition of the Yosemite Valley Loop Road has deteriorated. conditions for the majority of the Yosemite Valley Loop Road in 1999 were rated as "FAIR", whereas the condition was deemed "POOR" just three years and eight months later. The overall condition of a roadway is based on a number of variables such as pavement roughness, and surface conditions as well as specific attributes such as alligator cracking, rutting, patching, and transverse and lateral cracking. A Pavement Condition Rating of

less than 60 is considered "POOR." The 7.2 miles of the Yosemite Valley Loop Road included in the rehabilitation project had an average rating of 47. Roughly half of this section of roadway experienced rutting and around 60% contained alligator cracking (i.e., continuous parallel and perpendicular cracking that forms a checkerboard pattern of ruptured pavement). Because the condition of the roadway was inventoried and classified more than three years ago, and no major rehabilitation projects have been undertaken since that time; the Yosemite Valley Loop Road in 2006 is in noticeably worse condition than it was in 2003. Turning attention to Exhibit 1, and specifically the RIP pavement data results from 1999 at that time, none of the 7.2 miles included in the Yosemite Valley Loop Road rehabilitation project were found to be in "POOR" condition. The average Pavement Condition Rating was 71, and no alligator cracking was found.

- 4. Since 2004, minor temporary repairs have been performed on the Yosemite Valley Loop Road but these repairs *have not corrected the major problems* with the roadway. Minor, temporary repairs include a micro seal on portions of the roadway, annual pothole repairs, and the recent culvert improvements, between El Capitan Crossover and Sentinel Driver on Southside Drive, that were approved by the court on Monday, October 16, 2006. A micro seal is a very thin layer of small aggregate asphalt, overlaid on top of the existing roadway surface and is designed to temporarily mitigate a cracked surface by making it "smooth." A micro seal does not correct subgrade deficiencies of the roadway. Annual pothole repairs consist of filling potholes with cold asphalt. Culvert repairs approved by the court this fall that are currently underway, represent only a portion (approximately one-third) of total culvert repairs needed. Numerous culverts along other sections of the Yosemite Valley Loop Road remain to be repaired.
- 5. The further stressed a roadway becomes, the quicker it deteriorates as evidenced by the rapid deterioration the roadway is currently experiencing. Without immediate rehabilitative work, the current problems with pavement rutting, cracking, potholes, shoulder degradation, and slope failures will become progressively worse. These problems pose a threat to the safety of Park staff and the traveling public, such as swerving to avoid potholes or dropping a tire off the edge of a deteriorated shoulder, and either going down the slope or over-correcting and crossing

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into an oncoming lane of traffic. A key point to note is that the rate of deterioration for a roadway is not linear. Rather, it accelerates annually as the progressive rutting and cracking facilitates the intrusion of more surface water, accelerating the freeze-thaw deterioration and degradation of the subgrade. Many factors contribute to the deterioration of a roadway such as the traffic volumes, amount of heavy truck traffic, number and severity of freeze-thaw cycles, annual amount of precipitation (i.e., rain and snow accumulation), and time. Any further delay in rehabilitating the Yosemite Valley Loop Road will certainly exacerbate the deterioration because time is a constant factor working against the stability of a heavily weathered roadway with high traffic volumes. With this in mind, the Federal Highway Administration and the NPS originally planned to rehabilitate the road during the fall of 2006. The litigation related delays associated with this project will certainly lead to further accelerated deterioration of the roadway which increases the likelihood of impacts to the safety of the traveling public.

- 6. Rehabilitation of the Yosemite Valley Loop Road Environmental Assessment. In December 2005, the National Park Service released an environmental assessment (EA) for the rehabilitation of the roadway. I am familiar with the EA and its findings. Numerous negative impacts to resources were identified under the No Action Alternative, and consequently numerous beneficial impacts were identified under both action alternatives analyzed. Exhibit 2 presents Table II-3: Summary of Environmental Consequences from the EA.
- 7. Additionally, the segments of roadway to be rehabilitated experience significant flooding annually. It is not uncommon for sections of this roadway to be completely inundated with water during spring runoff or during heavy storm events. As presented in Exhibit 3 of this declaration, during the recent May, 2005, spring run-off, many miles of the Yosemite Valley Loop Road were completely under water, making sections of the roadway impassable and posing safety hazards to the traveling public and Park staff. These larger more extreme events, coupled with smaller more frequent weather events, pose a continual threat to the proper functioning and safety of the road, thereby exacerbating and increasing the rate of deterioration which makes the Yosemite Valley Loop Road more hazardous even during non-weather conditions.
 - 8. The major rehabilitation activities, working in combination to improve the overall

condition of the Yosemite Valley Loop Road, as thoroughly analyzed in the EA completed for the proposed project, include:

- (a) Replacement of deteriorated and undersized drainage culverts, as well as adding new drainage culverts where necessary, in order to reduce the likelihood of flooding and roadway saturation which leads to pavement distress;
- (b) Pulverization of the existing roadway, which will correct the rutting and cracking problems and provide a stable and uniform base on which to place the new asphalt surface; and
- (c) Placement of four new inches of asphalt surface to provide a smoother and safer surface for vehicles, in addition to raising the profile (i.e., vertical) grade of the roadway by four inches, thereby reducing the length of roadway subject to flooding under the more extreme weather events.
- 9. Proceeding immediately with the Yosemite Valley Loop Road rehabilitation project is imperative in order to correct severe pavement distress experienced on several sections of the roadway, to minimize the effects to the roadway caused by flooding and freeze-thaw events, and to ultimately provide for a safer roadway for Park visitors and staff to travel on. Upon completion of this project, the National Park Service will not need to perform anything beyond light maintenance on the repaired sections of this roadway for many years. Other tangible benefits of proceeding with this rehabilitation project will be to provide a better defined roadway edge, one that will discourage resource impacts adjacent to the roadway; as well as a reduction in sedimentation and erosion occurring along the roadway edge because a more stable, engineered-base and roadway surface will be provided which will greatly reduce or eliminate the shoulder degradation and edge raveling that is currently common along this roadway.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January **12**, 2007, at Lakewood, Colorado.

Patrick D. Flynn, P.E.